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Tiffany Turner

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

HP Docket No.: 10960787-6

Inventor(s): C. Venkatraman, et. al. **Group Art Unit:**

Serial No.: **Examiner:**

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Title: EMBEDDING WEB ACCESS FUNCTIONALITY INTO A DEVICE FOR USER INTERFACE FUNCTIONS

Continuation Application of Application

Serial No.: 09/721,409

Filed: November 21, 2000

Continuation Application of Application

Serial No.: 09/387,278

Filed: August 31, 1999

Continuation Application of Application

Serial No.: 08/740,289

Filed: October 25, 1996

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Sir:

Prior to the examination of the above-referenced application, please amend the application as follows.

IN THE SPECIFICATION

On page 1, line 1, insert the following paragraph:

This application is a continuation of Application No. 09/721,409, filed on November 21, 2000, which is a continuation of Application No. 09/387,278, filed on August 31, 1999, now U.S. Patent No. 6,170,007, which is a continuation of Application No. 08/740,289, filed on October 25, 1996, now U.S. Patent No. 5,956,487.

Page 5, please delete the first paragraph and insert therefor the following:

A solution for providing widely accessible, low cost and enhanced user interface functions for a device is disclosed. The solution involves embedding web access functionality into the device including a web server that provides a device web page. The device includes an embedded network interface that enables access to the device web page by a web browser. A user of the web browser accesses the user interface functions for the device through the device web page. The web server functionality may be implemented with existing circuitry in a device, such as an existing processor, memory, and input/output circuitry that normally perform device-specific functions, thereby avoiding the extra cost and space required for dedicated web server hardware.

Page 11, please delete the second paragraph and insert therefor:

In one embodiment, the device 10 is a printer device wherein the processor 200 and the memory 210 perform image rendering functions and the device-specific hardware 300 includes printer hardware and associated circuitry and wherein the input/output circuitry 220 provides network access to the printer device 10. The web server functionality is embedded into the printer device 10 by providing software or firmware for the processor 200 and by utilizing space available in the memory 210 and by using the existing input/output circuitry 220 such as Ethernet circuitry to transfer HTML files.

Page 12, please delete the second paragraph and insert therefor:

In yet another embodiment, the device 10 is a washing machine wherein the processor 200 and the memory 210 perform functions for controlling wash cycles. The device-specific hardware 300 includes hardware such as motors, valves, sensors, and associated circuitry. The web server functionality is embedded into the washing machine 10 by providing software or firmware for the processor 200 and by utilizing space available in the memory 210 and by adding the input/output circuitry to the device 10.

Page 20, please delete the first paragraph and insert therefor:

The web page 18 for the printer may also include manuals, parts lists, and other associated publications. These publications may be stored within the device 10 in, for example, a nonvolatile memory, or may be referenced elsewhere via hyperlinks contained in the web page 18. These publications contain dynamic information such as updated manuals as well as new and updated software driver routines for the device 10.

IN THE CLAIMS

Please cancel claims 1-32 without prejudice.

Please add the following claims:

33. (New) A web access mechanism of a fax machine, comprising:

a web server that generates a fax machine web page, wherein the fax machine web page provides a set of user interface functions for the fax machine, wherein some of the user interface functions enable control functions of the fax machine;

a network interface coupled to the web server, the network interface enabling access to the fax machine web page by a web browser, the network interface being configured to permit a user of the web browser to access the user interface functions for the fax machine through the fax machine web page; and

wherein the web access mechanism is embedded in the fax machine.

34. (New) The web access mechanism of claim 33, wherein the web server is configured to receive an HTTP command via the network interface and then generate an HTML file that defines the fax machine web page in response to the HTTP command.

35. (New) The web access mechanism of claim 34, wherein the HTTP command specifies a URL corresponding to the fax machine.

36. (New) The web access mechanism of claim 35 further comprising a monitor coupled to the web server.

37. (New) The web access mechanism of claim 34, wherein the HTML file contains at least one of (1) a set of information pertaining to the fax machine, (2) a

set of URLs that control a set of predetermined functions for the fax machine wherein each URL may point to a web page located internal to the fax machine, and (3) a hyperlink to an external web page that specifies additional information pertaining to the fax machine.

38. (New) A web access mechanism of a video player that reads video and audio information from a storage medium, comprising:

a web server that generates a video player web page, wherein the video player web page provides a set of user interface functions for the video player, wherein some of the user interface functions enable control functions of the video player;

a network interface coupled to the web server, the network interface enabling access to the video player web page by a web browser, the network interface being configured to permit a user of the web browser to access the user interface functions for the video player through the video player web page; and

wherein the web access mechanism is embedded in the video player.

39. (New) The web access mechanism of claim 38 wherein the storage medium is an optical storage medium.

40. (New) The web access mechanism of claim 38 wherein the storage medium is magnetic tape.

41. (New) The web access mechanism of claim 38 wherein the video player is a video player/recorder that reads and writes video and audio information to an optical storage medium.

42. (New) The web access mechanism of claim 38 wherein the video player is a video player/recorder that reads and writes video and audio information to a magnetic tape storage medium.

43. (New) The web access mechanism of claim 38, wherein the web server is configured to receive an HTTP command via the network interface and then generate an HTML file that defines the video player web page in response to the HTTP command.

44. (New) The web access mechanism of claim 43, wherein the HTTP command specifies a URL corresponding to the video player.

45. (New) The web access mechanism of claim 44 further comprising a monitor coupled to the web server.

46. (New) The web access mechanism of claim 43, wherein the HTML file contains at least one of (1) a set of information pertaining to the video player, (2) a set of URLs that control a set of predetermined functions for the video player wherein each URL may point to a web page located internal to the video player, and (3) a hyperlink to an external web page that specifies additional information pertaining to the video player.

47. (New) A web access mechanism of a television, comprising:

a web server that generates a television web page, wherein the television web page provides a set of user interface functions for the television, wherein some of the user interface functions enable control functions of the television;

a network interface coupled to the web server, the network interface

enabling access to the television web page by a web browser, the network interface being configured to permit a user of the web browser to access the user interface functions for the television through the television web page; and

wherein the web access mechanism is embedded in the television.

48. (New) The web access mechanism of claim 47, wherein the web server is configured to receive an HTTP command via the network interface and then generate an HTML file that defines the television web page in response to the HTTP command.

49. (New) The web access mechanism of claim 48, wherein the HTTP command specifies a URL corresponding to the television.

50. (New) The web access mechanism of claim 49 further comprising a monitor coupled to the web server.

51. (New) The web access mechanism of claim 48, wherein the HTML file contains at least one of (1) a set of information pertaining to the television, (2) a set of URLs that control a set of predetermined functions for the television wherein each URL may point to a web page located internal to the television, and (3) a hyperlink to an external web page that specifies additional information pertaining to the television.

52. (New) A web access mechanism of a thermostat, comprising:

a web server that generates a thermostat web page, wherein the thermostat web page provides a set of user interface functions for the thermostat, wherein some of the user interface functions enable control functions of the thermostat;

a network interface coupled to the web server, the network interface enabling access to the thermostat web page by a web browser, the network interface being configured to permit a user of the web browser to access the user interface functions for the thermostat through the thermostat web page; and

wherein the web access mechanism is embedded in the thermostat.

53. (New) The web access mechanism of claim 52, wherein the web server is configured to receive an HTTP command via the network interface and then generate an HTML file that defines the thermostat web page in response to the HTTP command.

54. (New) The web access mechanism of claim 53, wherein the HTTP command specifies a URL corresponding to the thermostat.

55. (New) The web access mechanism of claim 54 further comprising a monitor coupled to the web server.

56. (New) The web access mechanism of claim 53, wherein the HTML file contains at least one of (1) a set of information pertaining to the thermostat, (2) a set of URLs that control a set of predetermined functions for the thermostat wherein each URL may point to a web page located internal to the thermostat, and (3) a hyperlink to an external web page that specifies additional information pertaining to the thermostat.

57. (New) A web access mechanism of a refrigerator, comprising:

a web server that generates a refrigerator web page, wherein the refrigerator web page provides a set of user interface functions for the refrigerator, wherein

some of the user interface functions enable control functions of the refrigerator;

a network interface coupled to the web server, the network interface enabling access to the refrigerator web page by a web browser, the network interface being configured to permit a user of the web browser to access the user interface functions for the refrigerator through the refrigerator web page; and

wherein the web access mechanism is embedded in the refrigerator.

58. (New) The web access mechanism of claim 57, wherein the web server is configured to receive an HTTP command via the network interface and then generate an HTML file that defines the refrigerator web page in response to the HTTP command.

59. (New) The web access mechanism of claim 58, wherein the HTTP command specifies a URL corresponding to the refrigerator.

60. (New) The web access mechanism of claim 59 further comprising a monitor coupled to the web server.

61. (New) The web access mechanism of claim 58, wherein the HTML file contains at least one of (1) a set of information pertaining to the refrigerator, (2) a set of URLs that control a set of predetermined functions for the refrigerator wherein each URL may point to a web page located internal to the refrigerator, and (3) a hyperlink to an external web page that specifies additional information pertaining to the refrigerator.

62. (New) A web access mechanism of a washing machine, comprising:

a web server that generates a washing machine web page, wherein the

washing machine web page provides a set of user interface functions for the washing machine, wherein some of the user interface functions enable control functions of the washing machine;

a network interface coupled to the web server, the network interface enabling access to the washing machine web page by a web browser, the network interface being configured to permit a user of the web browser to access the user interface functions for the washing machine through the washing machine web page; and

wherein the web access mechanism is embedded in the washing machine.

63. (New) The web access mechanism of claim 62, wherein the web server is configured to receive an HTTP command via the network interface and then generate an HTML file that defines the washing machine web page in response to the HTTP command.

64. (New) The web access mechanism of claim 63, wherein the HTTP command specifies a URL corresponding to the washing machine.

65. (New) The web access mechanism of claim 64 further comprising a monitor coupled to the web server.

66. (New) The web access mechanism of claim 63, wherein the HTML file contains at least one of (1) a set of information pertaining to the washing machine, (2) a set of URLs that control a set of predetermined functions for the washing machine wherein each URL may point to a web page located internal to the washing machine, and (3) a hyperlink to an external web page that specifies additional information pertaining to the washing machine.

67. (New) A web access mechanism of a disk drive, comprising:

a web server that generates a disk drive web page, wherein the disk drive web page provides a set of user interface functions for the disk drive, wherein some of the user interface functions enable control functions of the disk drive;

a network interface coupled to the web server, the network interface enabling access to the disk drive web page by a web browser, the network interface being configured to permit a user of the web browser to access the user interface functions for the disk drive through the disk drive web page; and

wherein the web access mechanism is embedded in the disk drive.

68. (New) The web access mechanism of claim 67, wherein the web server is configured to receive an HTTP command via the network interface and then generate an HTML file that defines the disk drive web page in response to the HTTP command.

69. (New) The web access mechanism of claim 68, wherein the HTTP command specifies a URL corresponding to the disk drive.

70. (New) The web access mechanism of claim 69 further comprising a monitor coupled to the web server.

71. (New) The web access mechanism of claim 68, wherein the HTML file contains at least one of (1) a set of information pertaining to the disk drive, (2) a set of URLs that control a set of predetermined functions for the disk drive wherein each URL may point to a web page located internal to the disk drive, and (3) a

hyperlink to an external web page that specifies additional information pertaining to the disk drive.

72. (New) A web access mechanism of an oscilloscope, comprising:

a web server that generates an oscilloscope web page, wherein the oscilloscope web page provides a set of user interface functions for the oscilloscope, wherein some of the user interface functions enable control functions of the oscilloscope;

a network interface coupled to the web server, the network interface enabling access to the oscilloscope web page by a web browser, the network interface being configured to permit a user of the web browser to access the user interface functions for the oscilloscope through the oscilloscope web page; and

wherein the web access mechanism is embedded in the oscilloscope.

73. (New) The web access mechanism of claim 72, wherein the web server is configured to receive an HTTP command via the network interface and then generate an HTML file that defines the oscilloscope web page in response to the HTTP command.

74. (New) The web access mechanism of claim 73, wherein the HTTP command specifies a URL corresponding to the oscilloscope.

75. (New) The web access mechanism of claim 74 further comprising a monitor coupled to the web server.

76. (New) The web access mechanism of claim 73, wherein the HTML file contains at least one of (1) a set of information pertaining to the oscilloscope, (2) a

set of URLs that control a set of predetermined functions for the oscilloscope wherein each URL may point to a web page located internal to the oscilloscope, and (3) a hyperlink to an external web page that specifies additional information pertaining to the oscilloscope.

77. (New) A web access mechanism of a spectrum analyzer, comprising:

a web server that generates a spectrum analyzer web page, wherein the spectrum analyzer web page provides a set of user interface functions for the spectrum analyzer, wherein some of the user interface functions enable control functions of the spectrum analyzer;

a network interface coupled to the web server, the network interface enabling access to the spectrum analyzer web page by a web browser, the network interface being configured to permit a user of the web browser to access the user interface functions for the spectrum analyzer through the spectrum analyzer web page; and

wherein the web access mechanism is embedded in the spectrum analyzer.

78. (New) The web access mechanism of claim 77, wherein the web server is configured to receive an HTTP command via the network interface and then generate an HTML file that defines the spectrum analyzer web page in response to the HTTP command.

79. (New) The web access mechanism of claim 78, wherein the HTTP command specifies a URL corresponding to the spectrum analyzer.

80. (New) The web access mechanism of claim 79 further comprising a monitor coupled to the web server.

81. (New) The web access mechanism of claim 78, wherein the HTML file contains at least one of (1) a set of information pertaining to the spectrum analyzer, (2) a set of URLs that control a set of predetermined functions for the spectrum analyzer wherein each URL may point to a web page located internal to the spectrum analyzer, and (3) a hyperlink to an external web page that specifies additional information pertaining to the spectrum analyzer.

REMARKS

The specification has been amended ~~to~~ correct some typographical errors. New claims have been added to cover various embodiments of the invention. No new matter has been added. Applicant's would like to bring to the examiner's attention that many of the claims added in this preliminary amendment have similarities with claims 1-5 and 16-20 in U.S. Patent No. 6,170,007. Applicants respectfully request allowance of this application.

Respectfully submitted,

Chandrasekar Venkatraman, et al.

BY: _____

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Page 5, first paragraph

A solution for providing widely accessible, low cost and enhanced user interface functions for a device is disclosed. The solution involves embedding web access functionality into the device including a web server that provides a device web page. The device includes an embedded network interface that enables access to the device web page by a web browser. A user of the web browser accesses the user interface functions for the device through the device web page. The web server functionality may be implemented with existing circuitry in a device, such as an [exiting] existing processor, memory, and input/output circuitry that normally perform device-specific functions, thereby avoiding the extra cost and space required for dedicated web server hardware.

Page 11, second paragraph

In one embodiment, the device 10 is a printer device wherein the processor 200 and the memory 210 [preform] perform image rendering functions and the device-specific hardware 300 includes printer hardware and associated circuitry and wherein the input/output circuitry 220 provides network access to the printer device 10. The web server functionality is embedded into the printer device 10 by providing software or firmware for the processor 200 and by utilizing space available in the memory 210 and by using the existing input/output circuitry 220 such as Ethernet circuitry to transfer HTML files.

Page 12, second paragraph

In yet another embodiment, the device 10 is a washing machine wherein the processor 200 and the memory 210 [preform] perform functions for controlling wash cycles. The device-specific hardware 300 includes hardware such as motors, valves, sensors, and associated circuitry. The web server functionality is embedded into the washing machine 10 by providing software or firmware for the processor 200 and by utilizing space available in the memory 210 and by adding the input/output circuitry to the [video] device 10.

Page 20, first paragraph

The web page 18 for the printer may also include manuals, parts lists, and other associated publications. These publications may be stored within the device 10 in, for example, a nonvolatile memory, or may be referenced elsewhere via hyperlinks contained in the web page 18. These publications contain dynamic information such as updated manuals as well as new and updated software driver routines for the video device 10.